

In the Claims:

Please amend the claims as follows:

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36. (Amended) An IED comprising:

A1  
a power monitoring circuit operative to monitor a parameter of a portion of a power distribution system;

a processor coupled with said power monitoring circuit and operative to receive and process said monitored parameter and generate data comprising at least one of a result of said processing and power management information;

a display coupled with said processor, said display comprising a plurality of visual element sets, each of said plurality of visual element sets comprising a plurality of visual elements, wherein a first visual element of said plurality of visual elements is capable of being activated by selecting said first visual element and selecting a corresponding one of said plurality of visual element sets which includes said first visual element, said display operative to visually represent said data as a composite of a plurality of activated visual elements; and

wherein said processor is further operative to cyclically select each of said plurality of visual element sets and activate a subset of said plurality of visual elements in said selected visual element set corresponding to a portion of said data to be represented by said subset; and

further wherein said processor is operative to cycle through said plurality of visual element sets at a rate substantially fast enough to present an illusion that said data is continuously displayed on said display.

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Please add the following new claims:

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63. An IED comprising:

A2  
a power monitoring circuit operative to monitor a parameter of a portion of a power distribution system;

a processor coupled with said power monitoring circuit and operative to receive and process said monitored parameter and generate data comprising at least

one of a result of said processing and power management information;

a display coupled with said processor, said display comprising a plurality of columns of light emitting diodes ("LED's"), each of said plurality of columns comprising a plurality of LED's, wherein a first LED of said plurality of LED's is capable of being activated by selecting said first LED and selecting a corresponding of said plurality of columns which includes said first LED, said display operative to visually represent said data as a composite of a plurality of activated LED's; and

wherein said processor is further operative to cyclically select each of said plurality of columns and activate a subset of said plurality of LED's in said selected column corresponding to a portion of said data to be represented by said subset; and

further wherein said processor is operative to cycle through said plurality of columns at a rate substantially fast enough to present an illusion that said data is continuously displayed on said display..

64. The IED of Claim 63, wherein said processor is further operative to vary said rate to control brightness of said display.
65. The IED of Claim 63, wherein said processor is further operative to cycle through said plurality of columns to display said data on said display substantially simultaneous with said processing of said monitored parameter.
66. The IED of Claim 63, further comprising a memory wherein said processor is further operative to store said data in said memory and read said data from said memory to cyclically select each of said plurality of columns and activate said subset of said plurality of visual elements.
67. The IED of Claim 66, wherein said memory comprises a bit map.
68. The IED of Claim 63, wherein said processor further comprises an address bus and a data bus, said display being coupled with said data and address busses wherein said processor selects each of a plurality of columns using first signals transmitted on said address bus and activates a subset of a plurality of visual elements in said selected column using second signals transmitted on said data bus.

69. A method of expanding functionality of an IED, said IED comprising a base module coupled with a portion of a power distribution system, said method comprising:

- (a) monitoring a parameter of said portion;
- (b) generating an analog signal representative of said parameter;
- (c) converting said analog signal to a digital signal representative thereof;
- (d) implementing first power management functionality on said digital signal;
- (e) generating first power management data by said first power management functionality;
- (f) communicating said first power management data externally of said IED via at least one of a display and a communications interface;
- (g) receiving a first external function module by said base module, said first external function module comprising second power management functionality; and
- (h) facilitating implementation of said second power management functionality.

70. The method of Claim 69, wherein said first power management functionality comprises a first plurality of power management functions, said method further comprising:

- (i) facilitating said second power management functionality to disable a first subset of said first plurality of power management functions.

71. The method of Claim 70, wherein said second power management functionality comprises a second plurality of power management functions, said method further comprising:

- (j) facilitating substitution of said second subset for said first subset.

72. The method of Claim 69, wherein said first power management functionality comprises a first set of register outputs stored in a memory, said method further

comprising:

(i) facilitating said second power management functionality to utilize a subset of said first set of register outputs independent of said register outputs location in said memory.

73. The method of Claim 69, further comprising:

(i) communicating said digital signal to said first external function module.

74. The method of Claim 73, wherein (i) further comprises communicating said digital signal in real time.

75. The method of Claim 73, further comprising:

(j) computing a kilowatt value by said second power management functionality based on said digital signal.

76. The method of Claim 73, further comprising:

(j) computing at least one harmonic by said second power management functionality based on said digital signal.

77. The method of Claim 73, further comprising:

(j) recording a waveform by said second power management functionality based on said digital signal.

78. The method of Claim 73, further comprising:

(j) computing at least one symmetrical component by said second power management functionality based on said digital signal.

79. The method of Claim 69, further comprising:

(i) receiving, by said base module, said first external function module without uninstalling said IED.

80. The method of Claim 69, further comprising:

(i) communicating with a second external function module coupled with said first external function module through said first external function module.

81. The method of Claim 80, further comprising:

(j) identifying each of said first and second external function modules for subsequent individual communications with said base module based on a first connection of said second external function module to said first external function module and a second connection of said first external function module to said base module.

82. The method of Claim 69, further comprising:

(i) storing first program code in a first non-volatile memory in said base module;

(j) accessing a second non-volatile memory in said first external function module, said second non-volatile memory comprising second program code; and

(k) replacing said first program code in said first non-volatile memory with said second program code.

83. The method of Claim 82, further comprising:

(l) checking a version identifier of said second program code; and

wherein (k) further comprises replacing said first program code if said version identifier identifies said second program code as a later version than said first program code.

84. The method of Claim 82, further comprising:

(l) selecting said second program code from a plurality of program code stored in said second non-volatile memory based on compatibility with said base module.